

PDR RID Report

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Document PDR

RID ID	PDR	108
Review	FOS	
Originator Ref		ACK #09
Priority	2	

Section NA

Page TC-20, NC-10, NC-21 thru
NC-25

Figure Table NA

Category Name Design

Actionee HAIS

Sub Category

Subject Command load approval

Description of Problem or Suggestion:

No mention was made of providing autonomous or manual load approval for ATC load generation, nor for ATC patch load generation, to verify internal correctness or consistency, or mutual consistency between multiple EOS spacecraft, or with external items (e.g. TDRS or GN contacts, ephemerides, HGA-TDRS visibility, etc.).

Experience on past and current on-orbit spacecraft indicates such a verification process is necessary, and should be a composite integrated simultaneous process including the final versions of all internally and externally generated items (e.g., TDRS and GN contacts, ephemerides, HGA-TDRS visibility, etc.). The implicit assumption that systems and personnel producing these items will reliably and consistently produce products which are typically correct and mutually consistent may be unrealistic, particularly shortly after launch.

Originator's Recommendation

Include in the design and scenario descriptions an autonomous, integrated, composite verification process which verifies the correctness and mutual consistency of all weekly and daily ground system items (e.g. reports, ground scripts, descriptions of TDRS and GN contacts, ground data files), and items to be uplinked (e.g. command loads, ephemerides, onboard table loads), in direct or indirect support of on-orbit activities for multiple EOS spacecraft. This verification process should be invoked on a daily or weekly basis as appropriate, following the generation of the final version of all products to be verified for all EOS spacecraft, and must be independent of the systems and personnel which generate the products being verified. When applicable, it includes mutual consistency or relevant relationships between multiple EOS spacecraft.

The design should include means to detect discrepancies or inconsistencies, report them to appropriate users, implement user-directed resolutions, re-verify the corrected products, and await a formal user approval prior to allowing the products to be uplinked or used on-console or by non-FOS users, as appropriate.

Please discuss further with the MOM Support team.

GSFC Response by:

GSFC Response Date

HAIS Response by: D. Herring

HAIS Schedule 2/3/95

HAIS R. E. B. Moore

HAIS Response Date 1/24/95

The integrated design of the FOS will ensure that all loads and/or internally generated items are generated from the same sources and time frames, reducing the possibility of inconsistency among products. Knowing this, M&O and FOS will schedule meetings to discuss the need for load validation and approval processes, both manual and automated, to verify load correctness and consistency. The results of these meetings and subsequent designs and implementations shall be presented at CDR.

Status Closed

Date Closed 2/1/95

Sponsor Johns

***** Attachment if any *****